

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-49. (Cancelled).

50. (New) A system for performing fluid administration on a patient comprising:

- a single liquid pump (1),
- a liquid distribution system (2) connected to said pump (1) in such a way that liquid can flow from the liquid distribution system (2) to the pump (1) via a pump enter line (56) and vice versa via a pump exit line (57),
- liquid supply means (3) for supplying liquid to a patient (4) via said liquid distribution system (2) and said pump (1),
- a patient conduit (5) adapted for connecting said liquid distribution system (2) to a patient (4),
- a drain collector (6),

wherein said liquid pump (1) is unidirectional and said liquid distribution system (2) comprises switching means such as valves designed to alternatively connect the pump enter line (56) with the supply means (3) or with the patient conduit (5), said system further comprising two distinct lines, namely:

- a first line including successively said liquid supply means (3), said liquid distribution system (2), said liquid pump (1), said liquid distribution system (2) and said patient conduit (5), and

- a second line including successively said patient conduit (5), said liquid distribution system (2), said liquid pump (1), said liquid distribution system (2) and said drain collector (6).

51. (New) A system according to claim 50 wherein the liquid pump (1) is a peristaltic pump.

52. (New) A system according to claim 51 wherein the peristaltic pump is rotatable.

53. (New) A system according to claim 50 wherein said liquid distribution system (2) comprises two distinct hub chambers (7, 8), the first hub chamber (7) including at least one liquid supply port with dedicated valve means (9), one patient port with dedicated valve means (10) and one pump inlet (26), the second hub chamber (8) including at least, one patient port (18) or warmer port (16) with dedicated valve means and one pump outlet (27), said system further comprising control means arranged to close said patient port (10) of the first hub chamber (7) when said liquid supply port (9) is open and vice versa.

54. (New) A system according to claim 53 wherein said second hub chamber (8) further includes at least one drain port with dedicated valve means (11), said control means being also arranged to close said patient port (18) of the second hub chamber (8) when said drain port (11) is open and vice versa.

55. (New) A system according to claim 54 wherein said liquid distribution system (2) only includes two hub chambers (7, 8).

56. (New) A system according to claim 50 further comprising a warmer system (28), a cavity (17) including a warmer port (19) and a patient port (16), said patient port (18) of the second hub chamber (8) being connected to said warmer port (19) via said warmer system (28).

57. (New) A system according to claim 53 wherein said first hub chamber (7) includes several liquid supply ports with respective valve means (9).

58. (New) A system according to claim 57 wherein said liquid supply ports (9) are connected to respective liquid supply means having each a different kind of liquid.

59. (New) A system according to claim 50 wherein said liquid pump (1) is composed of a tubing and rolling surface on which the tubing is compressed once the cartridge is inserted into a pumping device containing rollers.

60. (New) A system according to claim 50 wherein said liquid pump (1) and said liquid distribution system (2) are fixed together to form a single cartridge.

61. (New) A system according to claim 60 wherein said liquid pump (1) is fixed to said liquid distribution system (2) by vibration attenuation means in order to minimize the vibration on the liquid distribution system (2) when the pump is operating.

62. (New) A system according to claim 50 wherein all hub chambers, including ports, are made within one single part.

63. (New) A system according to claim 62 wherein said single part is an injected part of plastic material.

64. (New) A system according to claim 50 wherein each hub chamber (7, 8) is closed with an upper wall made of a flexible membrane (13), said membrane including valve elements (39) situated above each of said port or port with valve means, said valve elements (39) being designed to close said port or port when the membrane (13) moves downwardly.

65. (New) A system according to claim 50 wherein said liquid distribution system includes liquid tight joints arranged in such a manner that they allow a liquid tight connection between said liquid distribution system and a membrane situated on it.

66. (New) A system according to claim 50 wherein said liquid distribution system includes an air sensor situated on the patient conduit side.

67. (New) A system according to claim 50 comprising a cartridge loading mechanism which allows a tight connection between the membrane and the valves and the liquid distribution system.

68. (New) A liquid distribution system (2) for a system performing fluid administration on a patient as defined in any one of the previous claims.

69. (New) A pressure sensor for a system for performing fluid administration on a patient as defined in claim 50.

70. (New) A system according to claim 50 further comprising a window for detecting correct positioning of the tube.